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June 7, 2006

Mr. John D. Macleod
Chairman
Occupational Safety and Health Standards Board
2520 Venture Oaks Way, Suite 350
Sacramento, CA 95833

JUN 08 2006
OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Subject: Petition to Amend the General Industry Safety Orders regarding Crane Design Requirements.

Dear Chairman Macleod:

With this letter I am petitioning the Standards Board to modify the General Industry Safety Orders by deleting the contents of Subchapter 7, Group 13, Section 4884, paragraphs (b) through (e) inclusive. The requested modified portions of the section are presented in **Attachment A** to this petition.

While I personally believe that; the requirements in Section 4884 are vital to California's crane safety effort, should remain in the CCR and be enforced; that the requirements being petitioned for deletion are safety enhancing in their content totally correct and in no way deficient, they are not the requirements accepted by, or enforced by, the State's compliance personnel. As long as the requirements of Section 4884 remain published as part of the GISO, and are not the requirements that the Division enforces or believes cranes in California must comply to, the Section's published requirements create unsafe conditions through confused expectations and unsafe operating conditions by crane users by the establishment of an expected level of safe equipment design, construction and installation that may not exist. Further and unfortunately, as shown below, the Division believes the requirements of Section 4884 are not necessary, or enforceable, so they are meaningless to the regulated public.

As background and supporting rational for granting this petition, the following information and attachments are provided.

A. Since the reorganization of the California Crane requirements in 1986, the crane users, owners, manufacturers and inspectors in the State of California have relied upon the contents in the referenced standards of Subchapter 7, Group 13, Section 4884 "Scope" to establish the minimum competent, engineered safety requirements for the "design, construction and installation" of California cranes. The Section's referenced National Consensus Standards have established the structural, mechanical and electrical engineered safety criteria and margins to provide the "safe equipment design" basis upon which the rest of the GISO's crane safety sections are over laid. This triad of "safe equipment design", safe equipment inspection, maintenance and testing" and "safe operation", published as the "GISO,

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Group 13 Regulations", has made California crane requirements the most comprehensive and safety-focused code in the United States.

B. On June 1, 2006 a meeting was held in the Division offices on Clay Street in Oakland. This meeting was between the Senior Division personnel and effected persons regarding the application of the requirements of Section 4884 on effected parties, the Division's enforcement of Section 4884 and the relationship of Section 4884 on the Division's enforcement of its own "Administration Code" requirements. This meeting culminated over 2 years of verbal and written communications between a crane owner, crane user, crane manufacturer and the Division. The core element of the meeting, and the previous two years of activities, was the Division's ongoing reclassification of two mobile crane models that were engineered to comply with a set of criteria specified in Section 4884 (c) (1) (b) into another classification of cranes, also addressed in Section 4884 but to which they do not comply.

C. While Mr. Len Welsh was scheduled to lead the meeting, he was not in attendance and Larry McCune, the Division's Principle Safety Engineer severed as the meeting's leader. The others in attendance were myself, Roy Berg, Senior Safety Engineer from the Northern California Region, Ken Fry, Chief of the Division's Crane Unit, Compliance Inspector Doug Woods from the Northern California Region and Jim McCarthy from the Southern California Region, Patrick Bell, Research and Standards Development Unit, Mike Manieri, Standards Board Staff, Eric Fidler, Manitowoc Cranes Manager of Product Safety, Jon Tierney, Coast Crane, Fred Water, The Walter Law Firm and Lisa Prinse, The Walter Law Firm.

D. During the meeting it was directly stated several times that Section 4884 does not establish any qualifying criteria for cranes used in California and that any qualifying criteria that might be implied from compliance with Section 4884 was not relevant to the application of the other sections of the GISO or the administration of the code by Division personnel. Further, division personnel have verbally classified Section 4884 as "gratuitous" by the fact that "it is not included in the statute language".

E. As additional back ground; to further support this petition; to delineate the breadth and impact of this issue; to illustrate the confusion of using this section and its crane related codes, I am providing the information below. All of this information was provided to, and discussed with, Senior Division Personnel prior to the June 1, 2006 meeting.

1. In 2000 Manitowoc Cranes, the nation's largest crane manufacturer, and distributor of internationally manufactured cranes, introduced to the United States market two "new" small cranes that had been initially designed and built under the design requirements mandated in Europe. As "crane design approaches" and "crane regulation requirements" differ around the world Manitowoc engineers evaluated the designs of the two new cranes against the requirements of the codes and standards applicable in the United States. These requirements are generally categorized as "ANSI / ASME B30" Standards and their associated "SAE Standards". This review determined that, while in Europe the crane was categorized as a "tower" crane, it could not be considered as one in the United States due to our nationally accepted criteria, standards and design requirements that are mandated in both the Federal OSHA Codes and in Section 4884 of the GISO. Further they determined that under United States criteria these cranes met the "mobile crane" mandated requirements published by both the Federal OSHA Standards and the California GISO Section 4884.

Having completed their engineering review Manitowoc Cranes placed the crane into the United States market, including California, as "meeting the requirements of ASME B30.5" just as every other national and international crane manufacturer does. As a result this engineering review and

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published statements these cranes have been accepted as "B30.5 - Mobile Cranes" in all Federal, Government Agency and State jurisdictions in the United States and its protectorates, with the exception of California's Division of Occupational Safety and Health.

In early 2001 the cranes were formally presented to California OSHA personnel to demonstrate to them these crane's state-of-the-art safety features and mobile crane design. At that demonstration various DOSH representatives stated both that it "looked like a tower crane" but that it "was a mobile crane". However, since that demonstration the Division's compliance personnel have required that the cranes meet the "tower crane" Administrative and Operational regulations. Further, when formally requested to provide the basis of their reclassification of the cranes from Section 4884 (c) (1) (b), "B30.5 - 1994, Mobile Cranes" to Section 4884 (c) (1) (b) "B30.3 - 1996, Construction Tower Cranes" no response has been provided. Up to and including the June 1, 2006 meeting no basis for the Divisions reclassification actions has been formally provided.

2. In the period between 2001 and June 1, 2006, various casual, and un-authoritative, verbal comments have been provided by various DOSH representatives as to "Why we reclassified the two cranes out of the manufacturer's designed designation of "Mobile Crane" and into to their chosen enforcement classification of "Tower Crane". These verbal "reclassification justification comments" are summarized below:

- a. "The two models of cranes look like a tower crane."
- b. "Some of the manufacturer's initial marketing literature called them "tower cranes".
- c. "They do not look like the line drawings published in the ASME B30.5 - Mobile Crane Standard".
- e. "They use a trolley."
- f. "They do not have a cab"
- g. "They do not have an "onboard" power source."

All of these comments were forwarded to the appropriate authoritative entities (ASME B30 Committee, ASME, Manitowoc Cranes) and were formally addressed in writing and verbally before and during the June 1, 2006 meeting. The written responses from the American Society of Mechanical Engineers (ASME), the ASME B30 Committee and Manitowoc Cranes (the Crane's manufacturer) clearly dispel any misconception of the relevance of the above comments to the classification of crane designs. All of these written responses were available, and their overall contents discussed, at the June 1, 2006 meeting. The letters provided by ASME and Manitowoc Cranes are attached as **Attachment B**.

3. At the June 1, 2006 meeting the Division's "reclassification justification comments" were once again discussed along with their written resolutions. None of the statements or information provided by ASME or Manitowoc was disputed as incorrect by the Division. Further, I asked several more direct questions to the State's representatives regarding the topics of:

- a) What engineering undertaken to assure that the Division's reclassifying the cranes was not establishing unsafe equipment and operational issues?;
- b) What relevance Section 4884 requirements had to the application of the Division's Administrative Codes?;
- c) What was the applicability of the "crane definitions" enacted in the Labor Code (**Attachment C**) to the Division's enforcement activities?;
- d) In the past, how has the Division dealt with the other instances where a crane in California has been designed to one American Standard but "looks like" a crane built under another accepted American Standards?; and

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e) If a manufacturer accomplishes the requirements of 4884 (d), in further support of it designation in accordance with 4884 (c), does that not take priority over all other general, non-engineered or arbitrary evaluations?

4. Below are listed the questions on the above topics and the general responses received from the Division:

Question 1. What engineering analysis has the Division accomplished to assure that reclassifying the two crane models (from their manufactured B30.5 design to the Divisions directed B30.3 design) does not adversely impact the crane's safe operational characteristics or margins of safety?

Response 1: None. There has been no engineering analysis performed by the Division to evaluate what effect reclassifying the crane will have on their safe operation. The reclassification is based solely on how the crane's look.

Question 2. Does a crane's meeting the requirements established in Section 4884 of the GISO and being classified as a particular type of crane listed therein, establish how the Division selects and applies their Administrative Requirements?

Response 2: No. The Division has the authority to apply their Administrative Requirements as they deem appropriate regardless of a cranes compliance with Section 4884.

Question 3. Since the Labor Code, Section 7301, defines "tower cranes" as cranes with a "vertical mast", the Division's administrative authority over that crane classification is based upon that definition and the tower structures on the two mobile crane models at the core of the discussion are significantly offset from the "vertical"; how can these two cranes be reclassified by the Division into a "tower crane" classification?

Response 3: "Almost vertical" and "vertical" are the same. The Division has the authority to interpret, as they see fit, the meaning of the words. They are not bound by the defined terms or their dictionary published, common language meanings.

Question 4. Of the other cranes that have been in the market for a great number of years and that "look like" other crane types, (i.e. Straddle Container Cranes - no applicable Section 4884 ASME standard versus Gantry Cranes - B30.2; Industrial Crane Trucks - ASME B56.7 versus Mobile Cranes - ASME B30.5; Digger Derricks ANSI A10.31 versus Mobile Cranes - ASME B30.5) what engineering analysis or other documentation has been provided to the Division by those manufacturers to keep their cranes from not being reclassified to their "look-like" crane standard? (**Attachment D**)

Response 4: No additional information was considered. There are no historical files for the classification of any of theses cranes. The Division has always accepted the manufacturer's published designation and engineered statements.

Question 5: If the published general crane groupings, according to the ASME B30 volumes, stated in Section 4884 (b) and (c) are not accepted by the Division then would not the engineering review accomplished by Manitowoc, and defined as an acceptable

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condition in Section 4884 (d) that permits a register mechanical or civil engineer to verify a cranes compliance, be applicable?

Response 5: No. The Division determines into which classification a crane is placed and which GISO requirements apply. Further, they do not have to provide any justification as to why they classify a crane into any particular crane grouping.

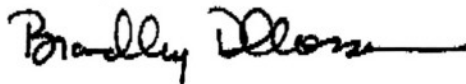
G. In summary, considering the Division's position statements that were formulated upon the information and questions presented to them, the continued publication of Section 4884 (b) through (e) is at best:

- 1) Confusing to the regulated public;
- 2) Creating unsafe and unfounded expectations by the crane users as to the physical abilities of the cranes they use;
- 3) Misinforming the California Licensed Crane Certifies as to what physical conditions and abilities must exist on a crane for certification in California; and
- 4) Misdirecting the national and international crane manufacturers as to what design requirements are necessary to satisfy California's safety codes.

Based upon my attendance at the June 1, 2006 meeting and my consideration of the information presented in that meeting; my role as a Licensed California Crane Inspector; and as member of the ASME B30 Committee that develops the B30 Safety Standards referenced in Section 4884, I formally and regretfully, petition the California Occupational Safety and Health Board to delete Section 4884 (b) through (e) from the General Industry Safety Orders, as indicated in **Attachment A**.

Thank you for your consideration of this petition. I look forward to discussing the issues contained herein at your earliest convenience and expediting the resolution of this most unsafe and confusing condition within the State of California crane safety efforts.

Sincerely,



Bradley D. Closson

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Attachment A**Changes Requested by the Petition****CALIFORNIA CODE OF REGULATIONS – TITLE 8
Group 13. Cranes and Other Hoisting Equipment****§4884. Scope.**

(a) The Orders in this Group shall apply to derricks, cranes, and boom-type excavators, but they shall not apply to aerial devices designed and used for positioning personnel (See Article 24).

~~(b) Hammerhead tower cranes manufactured after May 16, 1993 shall conform to ASME B30.3-1990, Hammerhead Tower Cranes.~~

(c)

~~(1)(A) Cranes and derricks manufactured after September 28, 1986, through June 23, 1999, shall be designed, constructed and installed in accordance with the following applicable American National Standards Institute (ANSI) and/or American Society of Mechanical Engineers (ASME) standards or those listed in subsection (c)(1)(B):~~

~~B30.2-1983, Overhead and Gantry Cranes (Top Running Bridge Multiple Girder)~~

~~B30.3-1975, Hammerhead Tower Cranes~~

~~B30.4-1981, Portal, Tower and Pillar Cranes~~

~~B30.5-1982, Crawler, Locomotive and Truck Cranes~~

~~B30.6-1977, Derricks~~

~~B30.7-1977, Base Mounted Drum Hoists~~

~~B30.8-1982, Floating Cranes and Floating Derricks~~

~~B30.11-1980, Monorails and Underhung Cranes~~

~~B30.13-1977, Controlled Mechanical Storage Cranes~~

~~B30.17-1980, Overhead and Gantry Cranes (Top Running Bridge, Single Girder, Underhung Hoist)~~

~~(1)(B) Cranes and derricks manufactured after June 23, 1999 shall be designed, constructed and installed in accordance with the following applicable American National Standards Institute (ANSI)/American Society of Mechanical Engineers (ASME) standards which are hereby incorporated by reference:~~

~~B30.2-1996, Overhead and Gantry Cranes (Top Running Bridge, Single or Multiple Girder, Top Running Trolley Hoist)~~

~~B30.3-1996, Construction Tower Cranes~~

~~B30.4-1996, Portal, Tower and Pedestal Cranes~~

~~B30.5-1994, Mobile and Locomotive Cranes~~

~~B30.6-1995, Derricks~~

~~B30.7-1994, Base Mounted Drum Hoists~~

~~B30.8-1993, Floating Cranes and Floating Derricks~~

~~B30.11-1993, Monorails and Underhung Cranes~~

~~B30.13-1996, Storage/Retrieval (S/R) Machines and Associated Equipment~~

~~B30.17-1992, Overhead and Gantry Cranes (Top Running Bridge, Single Girder, Underhung Hoist)~~

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~~(2) Articulating boom cranes manufactured after May 16, 1993 shall conform to these regulations and be provided with a permanently attached metal label stating that the equipment has been designed and constructed in accordance with ASME/ANSI B30.22-1987, and B30.22a-1988 Addenda, Articulating Boom Cranes, herein incorporated by reference, or has been approved as required by the provisions of Section 3206 of these orders.~~

~~(d)~~

~~(1) Except as provided in subsection (d) (2), all cranes and derricks manufactured prior to September 28, 1986, shall conform to this subsection and shall be designed, constructed and installed in accordance with the following applicable ANSI standards:~~

~~B30.2-1967, Overhead and Gantry Cranes~~

~~B30.4-1973, Portal, Tower, and Pillar Cranes~~

~~B30.5-1968, Crawler, Locomotive and Truck Cranes~~

~~B30.6-1969, Derricks~~

~~B30.15-1973, Mobile Hydraulic Cranes~~

~~Exception: Section 15.1.3.2(d) of B30.15-1973, Two-Blocking Damage Prevention Feature.~~

~~(2) Cranes manufactured prior to January 15, 1974, shall be modified to comply with applicable regulations in Group 13, Cranes and Other Hoisting Equipment of the General Industry Safety Orders, unless it can be shown during the process of certification that a crane cannot feasibly or economically be modified to comply with any one or more applicable requirements and the crane substantially complies with applicable Group 13 regulations and the ANSI or other design standard to which the crane was manufactured.~~

~~(e) Cranes and derricks which do not meet the applicable ANSI standards shall be designed, constructed and installed in accordance with the recommendations of a currently registered mechanical or civil engineer.~~

~~(f) (b) Cranes and derricks shall be operated, tested, inspected and maintained in accordance with these Orders.~~

~~(g) (c) All electrically powered cranes and derricks shall also comply with applicable electrical safety orders.~~